Lake Erie Harmful Algal Bloom Bulletin

18 July, 2019, Bulletin 06

Analysis

A *Microcystis* cyanobacteria bloom is present in the western basin of Lake Erie. Satellite imagery from 7/17 indicates the bloom extends from Maumee Bay up to 20 miles north along the Michigan coast, and up to 11 miles east along the Ohio coast. Sampling from 7/15 indicates toxin concentrations have increased since last week, but remain below the recreational threshold. Winds observed 7/16-18 have promoted an increase in surface concentrations and scum has been observed offshore of the Michigan and Ohio coastlines. *Keep pets and yourself out of the water in areas where scum is forming*. The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are present in Lake Erie.

Forecasts

Forecast winds (5-18kn) today through Sunday (7/18-21) may promote mixing, reducing surface *Microcystis* concentrations. Eastward transport of surface *Microcystis* concentrations is predicted. –Davis, Keeney

Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: *http://publicapps.odh.ohio.gov/beachguardpublic/*
Ohio EPA's site on harmful algal blooms: *http://epa.ohio.gov/HAB-Algae*
NOAA's GLERL provides additional HAB data here: *http://www.glerl.noaa.gov/res/HABs_and_Hypoxia*

The images below are "GeoPDF". Please visit https://go.usa.gov/xReTC for instructions on viewing longitude and latitude.

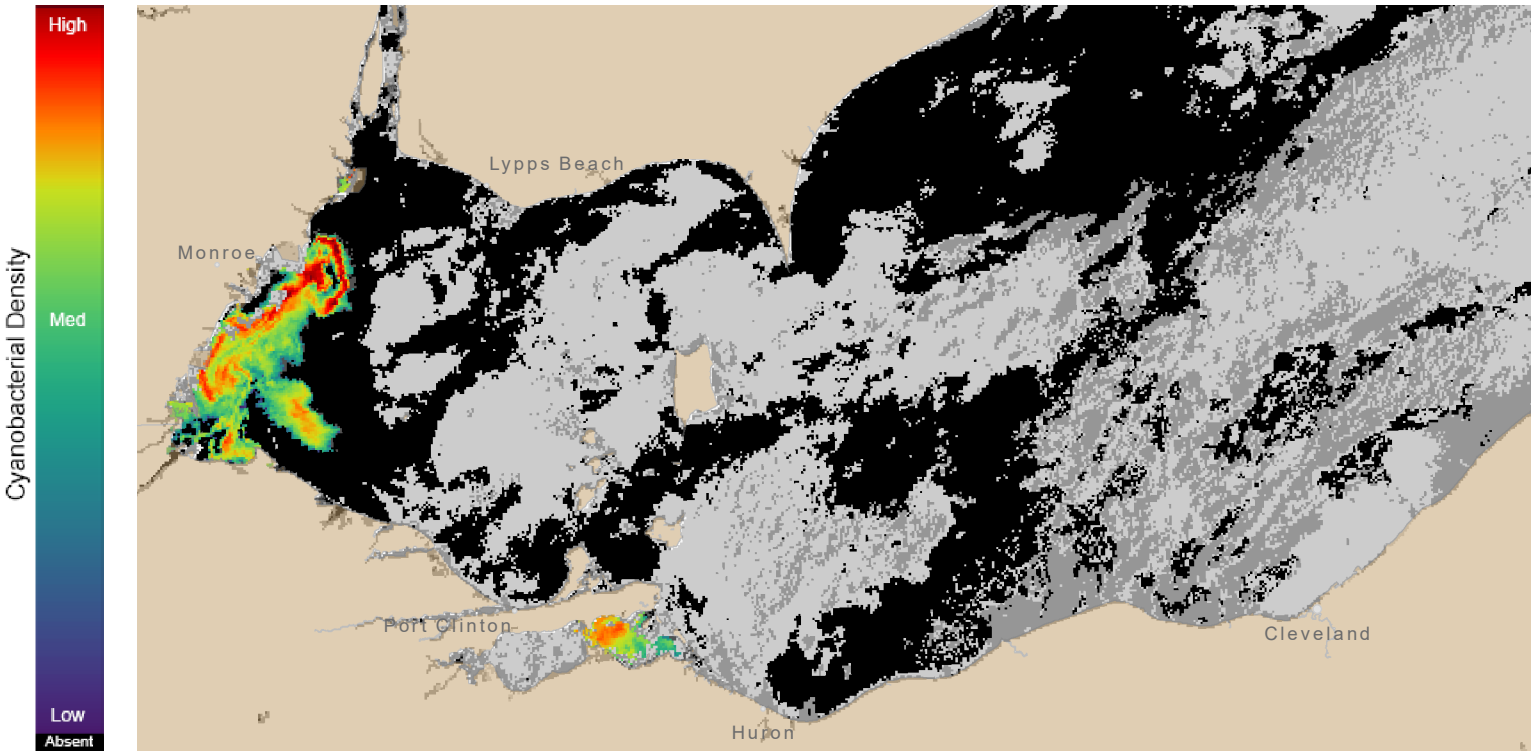


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 17 July, 2019 at 12:08 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/ml

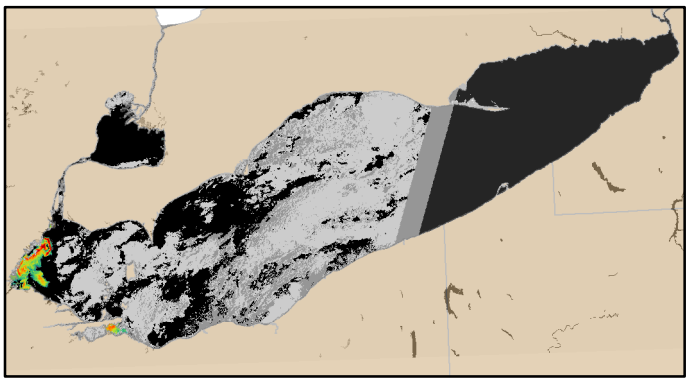
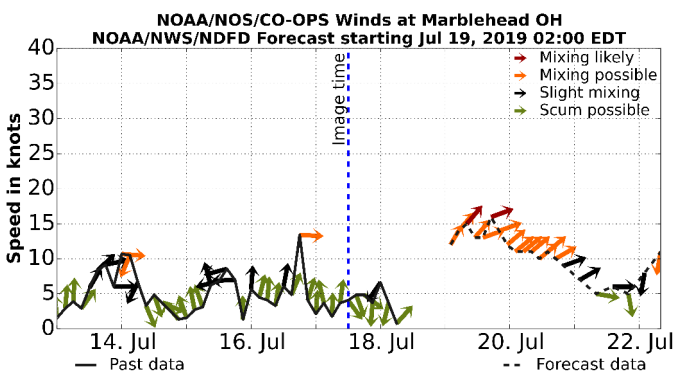


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 17 July, 2019 at 12:08.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

Figure 3. Nowcast position of bloom for 18 July, 2019 using LEOFS modelled currents to move the bloom from the 17 July, 2019 image.

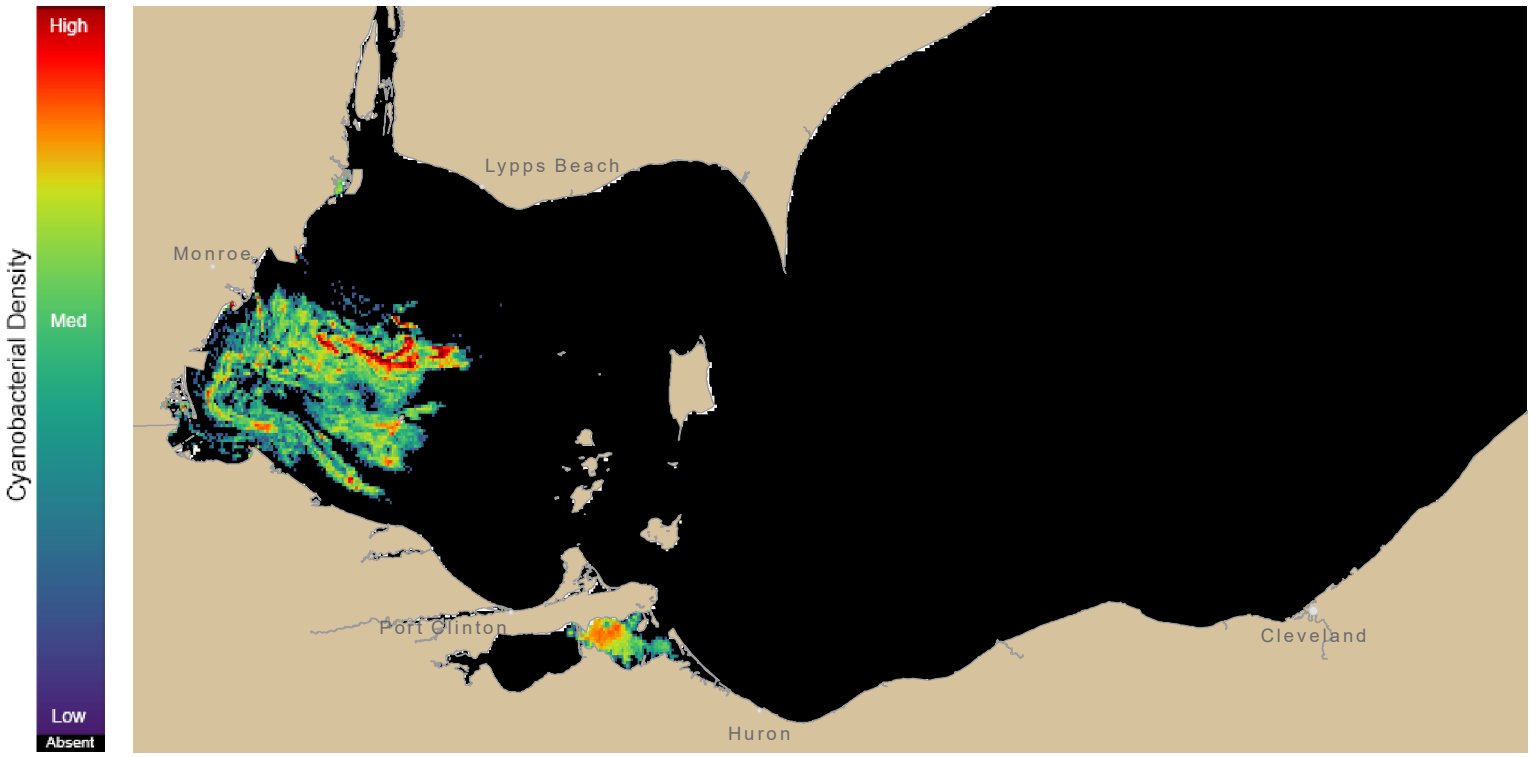
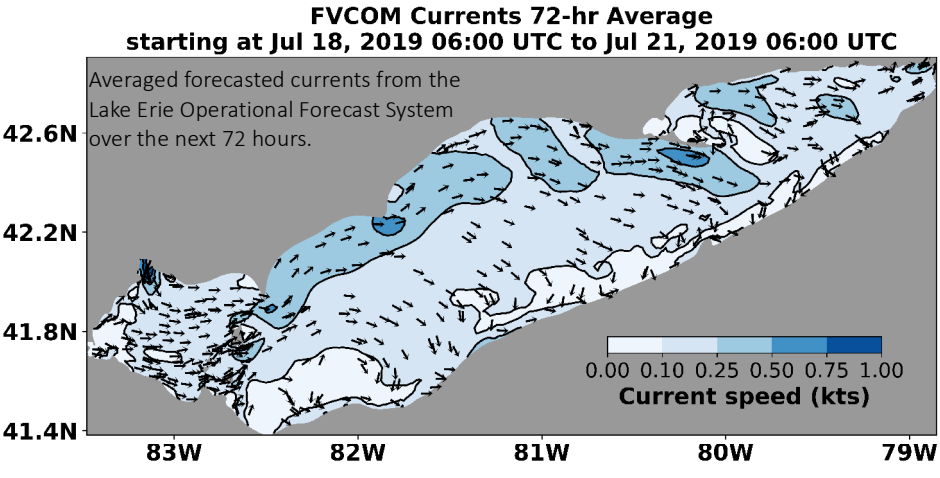


Figure 4. Forecast position of bloom for 21 July, 2019 using LEOFS modelled currents to move the bloom from the 17 July, 2019 image.



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